September 19, 1961

Dr. Boris Ephrussi
CNRS
Lab. Genetique Physiologique
Gif-sur-Yvette
Seine-et-Oise
France

Dear Boris and Harriet:

Having heard quite a few rumors to which I habitually pay a minimum of attention, I hear definitively from Howard Schneiderman in connection with the vigorous plans for the biology department there, that you and Harriet are definitely coming to Cleveland. Mainly I just wanted to offer my very best wishes to both of you; I know that you cannot have completely unmixed feelings about making the move, but hope that you will be happy and contented in your choice. I am not sure that it will be really easier for us to visit between Cleveland and Palo Alto than it was in Paris, but anyhow I hope that we will be seeing more of you.

You, especially Harriet, should be interested in our laboratory work being now completely "transformed" into the B. subtilis system. Our main effort has been on the linkage group that encompasses most of the steps in aromatic amino acid biosynthesis - but in which a histidine marker is unaccountably intercalated. Apart from its own interest, the linkage of several markers has made it possible to demonstrate the fracture of the linkage by the mechanical disruption of the DNA. Also, Ganesan has been able to get a very promising separation of different (unlinked) markers in cesium chloride pycnography with a nice correspondence to the variation in melting point of the different markers.

One rather puzzling point, perhaps Harriet has some more insight into. We found that the competence can be rapidly destroyed by exposing competent cells to periodate; this has little effect if added after the uptake of DNA and I therefore doubt that it is based on differential loss of viability though this is hard to discount altogether. This finding may eventually be interesting but is not so startling. But in addition, at somewhat higher concentrations, periodate will also inactivate the DNA, and it is hard to visualize just what the chemical reaction in DNA could be to account for this sensitivity. Now this recalls the work by McCarty on the inactivation of DNA by ascorbic acid (that is, peroxide) which was reversable by glutathione. Harriet, didn't you do some further work on that reaction after McCarty's paper? Do you understand it at all on a chemical basis?

When do you come to the states to resettle? We do hope to be seeing you.

Yours sincerely,

Joshua Lederberg